

Application/Control Number: 10/662,550
Art Unit: 2628

Docket No.: 2000-0042-CON

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AMENDMENT

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 21 (Cancelled)

22. (currently amended) A method for the synthesis of photo-realistic animation of an object, the method comprising:

obtaining, for each frame in a plurality of N frames of an object animation, a target feature vector comprising visual features and non-visual features associated with the object animation; and

selecting candidate image samples utilizing the target feature vector to generate a photo-realistic animation of the object, wherein generating the photo-realistic animation of the object occurs using a an audio/video unit selection process in which a longest possible candidate image sample is selected.

23. (currently amended) A method for the synthesis of photo-realistic animation of an object, the method comprising:

obtaining, for each frame in a plurality of N frames of an object animation, a target feature vector comprising visual features or non-visual features associated with the object animation; and

selecting candidate image samples utilizing the target feature vector to generate a photo-realistic animation of the object, wherein generating the photo-realistic animation of the object

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occurs using a an audio/video unit selection process in which a longest possible candidate image sample is selected.

24. (Previously Presented) The method of claim 22, wherein selecting candidate image samples further comprises for each frame in the plurality of N frames of the animation, selecting candidate image samples associated with the object animation using a comparison of a combination of visual features and non-visual features with the target feature vector.

25. (Previously Presented) The method of claim 24, further comprising compiling the selected image sample candidates to form a photo-realistic animation.

26. (Cancelled)

27. (Previously Presented) The method of claim 22, further comprising:
creating a first database of image samples showing an object in a plurality of appearances;
creating a second database of the visual features for each image sample of the object; and
creating a third database of the non-visual features of the object in each image sample.

28. (Previously Presented) The method as defined in claim 27, wherein the candidate image samples are selected from the first database, and further comprising:
selecting, for each frame, a number of candidates image samples from the first database based on the target feature vector;
calculating, for each pair of candidates of two consecutive frames, a concatenation cost from a combination of visual features from the second database and object characteristics from the third database; and
performing a Viterbi search to find the least expensive path through the candidates accumulating a target cost and concatenation costs.

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29. (Previously Presented) The method of claim 27, wherein the animation is a talking-head animation, the first database stores sample images of a face that speaks, the second database stores associated facial visual features and the third database stores acoustic information for each frame in the form of phonemes.

30. (currently amended) An animation of an object generated according to a process of: obtaining, for each frame in a plurality of N frames of an object animation, a target feature vector comprising visual features and non-visual features associated with the object animation; and

selecting candidate image samples utilizing the target feature vector to generate a photo-realistic animation of the object, wherein generating the photo-realistic animation of the object occurs using a an audio/video unit selection process in which a longest possible candidate image sample is selected.

31. (Previously Presented) The animation of claim 30, wherein the step of selecting candidate image samples further comprises for each frame in the plurality of N frames of the animation, selecting candidate image samples associated with the object animation using a comparison of a combination of visual features and non-visual features with the target feature vector.

32. (Previously Presented) The animation of claim 31, wherein the animation is generated according to the additional step of compiling the selected image sample candidates to form a photo-realistic animation.

33. (cancelled)

34. (Previously Presented) The animation of claim 30, wherein the animation is generated by a process that further comprises:

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creating a first database of image samples showing an object in a plurality of appearances;

creating a second database of the visual features for each image sample of the animation;
and

creating a third database of the non-visual features of the object in each image sample of the animation.

35. (Previously Presented) The animation of claim 34, wherein the candidate image samples are selected from the first database, and the process further comprises:

selecting, for each frame, a number of candidates image samples from the first database based on the target feature vector;

calculating, for each pair of candidates of two consecutive frames, a concatenation cost from a combination of visual features from the second database and object characteristics from the third database; and

performing a Viterbi search to find the least expensive path through the candidates accumulating a target cost and concatenation costs.